SEEDLESSNESS IN TOMATOES

IN SCIENCE for December 11, there is an interesting news item,[1] presumably based on a recent paper[2] by Dr. Felix G. Gustafson, in which he describes the production of seedless tomatoes and other fruits as a result of treating unpollinated flowers with various organic acids. It might be of interest to some to know that this phenomenon, in the case of tomatoes at least, occurs in nature, under certain conditions.

In the Winter Garden Region of Texas, as in many other sections of the semi-arid Southwest, tomatoes will grow all summer long under irrigation, but, with the exception of some of the small-fruited varieties such as Red Cherry, they do not set any fruit. As a result of a cross between Large Cherry and Bonny Best some promising selections have been obtained which have larger fruit than the small fruited parent and which at the same time set fruits during the adverse hot dry months. The fruits of these plants contain seeds in June, and usually also in early July, but with the higher temperatures of midsummer, they become seedless. Only once in a while will one contain a seed. In November, the fruits are again seed-bearing. During this seedless period the plants bear just as profusely as at other times and the fruits are of fine quality. In view of Dr. Gustafson's studies it would seem that possibly the substances necessary for fruit formation are stimulated to develop under these Southwestern conditions—perhaps by the pollination process. Drs. Ora Smith and H. L. Cochran have shown that fertilization is often prevented under conditions of high temperatures (such as occur in Texas), even though pollination actually takes place.[3] Practically all varieties fail to set fruits if they are not fertilized, hence the peculiar characteristic exhibited by these tomato selections is an interesting one, especially so in the light of Dr. Gustafson's recent studies.

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A CASE OF INCORRECT IDENTIFICATION

GRANTIA is a sponge that occurs abundantly in Europe and figures largely in European text-books of zoology for that reason. Along the Atlantic coast of North America, and particularly at Woods Hole, Massachusetts, we have a sponge that bears a superficial resemblance to *Grantia*. Many years ago some one carelessly assumed that it was indeed that genus. A few moments are enough to show that such is not the case. *Grantia* Fleming 1828 has a distinct dermal cortex containing a special cortical skeleton of tangentially placed radiate spicules. The American so-called *Grantia* does not have such a cortex. Ours is no unknown genus, but one that has been familiar to students of sponges for over a century; it was named *Scypha* by Gray in 1821. A tentative identification as to species of the Woods Hole "Sycon" sponge may be given as *Scypha* (*Spongia*) *coronata* (Ellis and Solander 1786).

This affects a great deal of labeling in illustrations of American text-books, of museum specimens sold by biological supply houses, and especially labeling of prepared slides distributed by such companies.

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ABNORMAL FEVER CASES

CASES of patients who show abnormally high temperatures for extended periods are occasionally reported. The conclusion in such cases is usually that some artificial means is being used to warm the thermometer.

The author has found such a means in addition to the usual suggestions of heating pad and hot-water bottle that might ordinarily be suspected. If a piece of dry cloth be wrapped about the bulb of a clinical thermometer and then the breath be blown against the bulb with considerable force, it is possible to raise the temperature to 106 to 108 degrees Fahrenheit, which is usually the limit of such thermometers.

An explanation of this, suggested by Dr. F. E. Poindexter, of St. Louis University, is that the water vapor in the breath is adsorbed by the fibers of the cloth. The heat of adsorption causes the rise in temperature above ordinary body temperature.

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SCIENTIFIC BOOKS

MILLER'S COMPLETE WORKS

THANKS to the enlightened generosity of the University of Illinois the first volume of the collected works of George Abram Miller is now available to the mathematical public. In it are reprinted some 59 papers, comprising Professor Miller's contributions to the theory of groups of finite order that were published during the years 1894–99. In addition there are three essays on the early history of group theory written expressly for this volume. They will be found at pages 1, 91 and 427. This is an innovation in such a publication, but is a most happy one. These 58

[1] SCIENCE Supplement, 84: 7, 1936.
[2] F. G. Gustafson, *Proc. Nat. Acad. Sci.*, 22: 628–636.
[3] Ora Smith and H. L. Cochran, Cornell Univ. Memoir, 175, 1935.